

WHAT IS CLAIMED IS:

1. An air purifier comprising:

5 a high mass-flow rate air-mover having an inlet and an outlet,

a low mass-flow rate ultra-violet radiation decontamination device having an inlet and an outlet,

10 said decontamination device mounted in spaced relation to said air-mover so as to space said inlet of said air-mover from said inlet of said decontamination device,

15 said inlet of said decontamination device disposed oppositely to said inlet of said air-mover relative to said outlet of said decontamination device along a low mass-flow rate flow path of a low mass-flow rate air flow passing ambient air into said inlet of said decontamination device, through said decontamination device so as to pass for an operative dwell time into operative proximity to at least one UV emitter mounted in said decontamination device and so as to exit from said outlet of said air-mover to then be drawn into said inlet of said air-mover,

20 said air-mover spaced from said decontamination device so as to draw into said inlet of said air-mover a second air-flow of said ambient air, said second air flow flowing along a second flow path wherein said second flow path does not flow within said operative proximity to said at least one UV emitter.

25 wherein said low mass-flow rate air flow and said second air flow cumulatively form a high mass-flow rate flow being urged by said air-mover through said air-mover so as to expel said high mass-flow rate air flow into said ambient air.

2. The air purifier of claim 1 wherein said air-mover and said decontamination device are rigidly mounted vertically spaced from one another within a housing.

3. The air purifier of claim 2 wherein said decontamination device is mounted above said air-mover.

4. The air purifier of claim 2 wherein said decontamination device is mounted below said air-mover.

5. The air purifier of claim 3 wherein said air-mover is a blower and said UV emitter is mounted within a duct.

6. The air purifier of claim 4 wherein said air-mover is a blower and said UV emitter is mounted within a duct.

7. The air purifier of claim 2 wherein said housing has an outlet aperture in a first surface of said housing and at least one inlet aperture in a second surface of said housing, said housing otherwise being substantially sealed to air flow, said outlet aperture communicating with said outlet of said air-mover, said at least one inlet aperture adjacent said inlet of said decontamination device, said at least one inlet aperture communicating ambient air flow of said ambient air into both said second flow path and said low mass-flow rate flow path.

8. The air purifier of claim 7 wherein said outlet aperture does not face in the same direction as said at least one inlet aperture whereby air flow from said outlet aperture exhausting into said ambient air may recirculate within the air space of an enclosure in which said air purifier is placed before being re-drawn as said ambient air flow into said at least one inlet aperture.

9. The air purifier of claim 8 wherein said air-mover is a blower and said UV emitter is mounted within a duct.

10. The air purifier of claim 9 wherein said duct is aligned so that said low mass-flow rate air flow through said duct is orthogonal to a plane substantially containing said inlet of said air-mover.

11. The air purifier of claim 10 wherein said duct is elongate and aligned orthogonally to an exhaust direction of said blower.

12. The air purifier of claim 11 wherein said at least one inlet aperture is generally perpendicular to said outlet aperture.

13. The air purifier of claim 12 wherein said at least one inlet aperture and said exhaust aperture are on side walls of said housing.

14. The air purifier of claim 13 wherein said at least one inlet aperture is an array of apertures vertically spaced over one sidewall of said sidewalls of said housing.

15. The air purifier of claim 7 wherein said second air flow and said low mass-flow rate air flow are generally parallel at positions along said air flows when said low mass-flow rate air flow is in said operative proximity to said at least one UV emitter.

16. The air purifier of claim 7 wherein said second air flow and said low mass-flow rate air flow are ducted in a common duct containing said at least one UV emitter.

17. The air purifier of claim 15 wherein said decontamination device and said air-mover are co-axial along the substantial air flow directions of said second air flow, said low

mass-flow rate air flow, and an exhaust air flow direction from said outlets of said air-mover and said decontamination device.

5 18. The air purifier of claim 16 wherein said decontamination device and said air-mover are co-axial along the substantial air flow directions of said second air flow, said low mass-flow rate air flow, and an exhaust air flow direction from said outlets of said air-mover and said decontamination device.

10 19. The air purifier of claim 17 wherein said air-mover is mounted above said decontamination device.

20. The air purifier of claim 18 wherein said air-mover is mounted above said decontamination device.

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